

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Previously Presented) A bipolar battery comprising:
at least two electrochemical cells;
a biplate arranged between adjacent cells, the biplate having opposed major surfaces and
a peripheral surface extending between the opposed major surfaces; and
a gasket supporting the biplate, the gasket:
being made from a hydrophobic material to prevent the creation of an electrolyte
path between the electrochemical cells,
being frame shaped and at least partially encompassing the peripheral surface of
the biplate, and
being provided with means for permitting gas passage through the gasket,
wherein the hydrophobic material has deformable properties to provide an outer
pressure tight seal of the battery,
wherein the means for permitting gas passage is arranged on one distal end of the
frame shaped gasket, and
wherein the hydrophobic material includes a thermoplastic elastomer.
2. (Previously Presented) The battery according to claim 1, wherein the means for
permitting gas passage through the gasket includes at least one channel interconnecting the
electrochemical cells.
3. (Previously Presented) The battery according to claim 2, wherein each at least one
channel includes a hole in the gasket, said hole being in communication with an inside of the
gasket in each electrochemical cell.
4. (Previously Presented) The battery according to claim 1, further comprising: guiding
means for controlling the position of the biplate during assembling of the bipolar battery.

5. (Previously Presented) The battery according to claim 4, wherein the guiding means includes at least one boss.

6. (Cancelled).

7. (Previously Presented) The battery according to claim 1, wherein the hydrophobic material is elastic.

8. (Cancelled).

9. (Previously Presented) The battery according to claim 7, wherein the gasket is made through an injection molding process.

10. (Currently Amended) A bipolar battery having at least two electrochemical cells comprising:

a case;

a negative end terminal including a negative endplate in contact with a negative electrode;

a positive end terminal including a positive endplate in contact with a positive electrode;

at least one set of a negative electrode, a biplate and a positive electrode arranged in a sandwich structure between the negative and the positive endplates, the biplate having opposed major surfaces and a peripheral surface extending between the opposed major surfaces;

at least one separator arranged between each negative and positive electrode, the separator including an electrolyte; and

a gasket in the shape of a frame, made of a hydrophobic material and arranged at least one of between each biplate or between a biplate and ~~end-plate~~endplate, whereby the gasket prevents an electrolyte path between electrochemical cells,

wherein the hydrophobic material includes a thermoplastic elastomer,

wherein the hydrophobic material has deformable properties to provide an outer pressure tight seal of the battery within the case,

wherein the gasket includes means for permitting gas passage between the electrochemical cells through the gasket thereby creating a common gas space for the electrochemical cells in the battery,

wherein the gasket at least partially encompasses the peripheral surface of the biplate, and
wherein the biplate does not include any through holes.

11. (Previously Presented) The battery according to claim 10, wherein the means for permitting gas passage through the gasket includes at least one channel interconnecting the electrochemical cells.

12. (Previously Presented) The battery according to claim 11, wherein each channel includes a hole in the gasket, said hole being in communication with an inside of the gasket in each electrochemical cell.

13. (Previously Presented) The battery according to claim 10, wherein guiding means is provided in the gasket, for controlling the position of a biplate during assembling of the bipolar battery.

14. (Previously Presented) The battery according to claim 13, wherein the guiding means includes at least one boss.

15. (Previously Presented) The battery according to claim 10, wherein the means for permitting gas passage is arranged on one distal end of the gasket.

16. (Previously Presented) The battery according to claim 10, wherein the hydrophobic material is elastic.

17. (Cancelled).

18. (Original) The battery according to claim 16, wherein the gasket is made through an injection molding process.

19.-32. (Cancelled).

33. (Previously Presented) The battery according to claim 1, wherein the bipolar battery is a starved electrolyte bipolar battery.

34. (Previously Presented) The battery according to claim 10, wherein the bipolar battery is a starved electrolyte bipolar battery.

35. (Cancelled).

36. (Currently Amended) The battery according to claim 4, wherein the guidanceguiding means comprises a rim of the gasket.

37. (Currently Amended) The battery according to claim 13, wherein the guidanceguiding means comprises the rim of the gasket.

38. (Currently Amended) A bipolar battery having at least two electrochemical cells comprising:

a case;

a negative end terminal including a negative endplate in contact with a negative electrode;

a positive end terminal including a positive endplate in contact with a positive electrode;
at least one set of a negative electrode, a biplate and a positive electrode arranged in a sandwich structure between the negative and the positive endplates, the biplate having opposed major surfaces and a peripheral surface extending between the opposed major surfaces;

at least one separator arranged between each negative and positive electrode, the separator including an electrolyte; and

a gasket in the shape of a frame, made of a hydrophobic material and arranged at least one of between each biplate or between a biplate and ~~end plate~~endplate, whereby the gasket prevents an electrolyte path between the electrochemical cells,

wherein the battery is selected from the group consisting of NiMH, NiCd and NiZn,

wherein the hydrophobic material has deformable properties to provide an outer pressure tight seal of the battery within the case,

wherein the gasket includes means for permitting gas passage between the electrochemical cells through the gasket thereby creating a common gas space for the electrochemical cells in the battery,

wherein the gasket at least partially encompasses the peripheral surface of the biplate, and wherein the biplate does not include any through holes.

39. (Currently Amended) A bipolar battery having at least two electrochemical cells comprising:

a case;

a negative end terminal including a negative endplate in contact with a negative electrode;

a positive end terminal including a positive endplate in contact with a positive electrode;

a positive terminal connector and a negative terminal connector in contact with the positive and the negative endplates, respectively;

at least one set of a negative electrode, a biplate and a positive electrode arranged in a sandwich structure between the negative and the positive endplates, the biplate having opposed major surfaces and a peripheral surface extending between the opposed major surfaces;

at least one separator arranged between each negative and positive electrode, the separator including an electrolyte; and

a gasket in the shape of a frame, made of a hydrophobic material and arranged at least one of between each biplate or between a biplate and ~~end plate~~endplate, whereby the gasket prevents an electrolyte path between the electrochemical cells,

wherein the hydrophobic material has deformable properties to provide an outer pressure tight seal of the battery within the case,

wherein the gasket includes means for permitting gas passage between the electrochemical cells through the gasket thereby creating a common gas space for the electrochemical cells in the battery,

wherein the gasket at least partially encompasses the peripheral surface of the biplate, wherein the biplate does not include any through holes, and

wherein the positive and the negative terminal connectors are adjustable relative to the case in such a way that the positive and the negative end terminals are individually accessible through the positive and the negative terminal connectors, respectively, from one of at least two sides of the case.

40. (Currently Amended) The battery according to claim 39, wherein a first end of each terminal connector is arranged to be attached to each endplate, and a second end, distal from the first end, is arranged to be ~~fasten~~fastened to the case of the battery.

41. (Previously Presented) The battery according to claim 40, wherein each terminal connector is attached to the respective endplate via a feed-through, which is secured in the case.

42. (Previously Presented) The battery according to claim 40, wherein the second end of each terminal connector is bent, and is fastened to the case by inserting the bent portion into one or more grooves arranged in the case.